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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/609,250	06/26/2003	Venkat Selvamanickam	1014-SP101-US	7760

34456 7590 09/05/2007  
LARSON NEWMAN ABEL POLANSKY & WHITE, LLP  
5914 WEST COURTYARD DRIVE  
SUITE 200  
AUSTIN, TX 78730

EXAMINER
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KACKAR, RAM N

ART UNIT	PAPER NUMBER
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1763

MAIL DATE	DELIVERY MODE
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09/05/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/609,250

Applicant(s)

SELVAMANICKAM ET AL.

Examiner

Ram N. Kackar

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 July 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 26,28-30 and 32-50 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 26,28-30 and 32-50 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 7/30/2007 has been entered.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 26, 28-30 and 32-50 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In this instance phrase "gas channels being open and unfilled" is neither supported by the specification (new matter) nor understood since gas channel will be normally filled with flowing gas.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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5. Claims 49-50 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 49-50 recites the limitation "inner diameter" in first line. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. **Claims 26, 28-30 and 32-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lijima et al (2001/0006042) in view of Vaidya et al (US 5076203).**

Lijima et al disclose a process used for making a buffer layer of yttrium stabilized zirconia (YSZ) or MgO for a superconducting film (Abstract and paragraph 71) using ion assist (39) and teach cooling and positioning a translating substrate (tape like) which could comprise metal like nickel (Paragraph 59) in a deposition chamber for vacuum deposition (abstract and Fig 3), gas inlet (38), source of deposition material (36), means of delivering the deposition material (ion beam -38), means of translating a substrate (24,25), means of positioning the substrate so that deposition material impinges on the substrate (23).

Lijima et al teach that the measure of biaxial texture is FWHM (full width at half maximum) and that it could be minimum at an incidence angle of 50-60 degrees (paragraph 16,87 and 99). Further Lijima et al disclose various parameters affecting FWHM and disclose it could be below 10 degrees (Fig 13).

Lijima et al do not disclose cooling by injecting gas through gas channels of the substrate block

Vaidya et al disclose a process for cooling and positioning a translating substrate in a deposition chamber for vacuum deposition (Col 1 lines 8-11), gas inlet (Fig 1-17, Fig 6-30), source of deposition material (Fig 6-27), means of delivering the deposition material (electron – beam heater (Col 3 line 35), means of translating a substrate (Fig 6-22) from 0-90 meters per min (Abstract), curved means of positioning the substrate so that deposition material impinges on the substrate (23) whereas the substrate positioning means contains internal liquid coolant channels (23a and 23b) and internal gaseous coolant delivery channels (Fig 6-30, Fig 7-Fig 10 and Col 6 lines 5-68 ) which could use oxygen or argon to allow the temperature from 0 degrees C upwards.

Vaidya et al teach that gas introduction between the support and tape improves thermal coupling between the web and the support and reduces the coefficient of friction between the two (Abstract).

Therefore it would have been obvious for one of ordinary skill in the art at the time of invention to have injecting gas through gas channels of the substrate block for improved thermal coupling and cooling between the web and the support and reduces the coefficient of friction between the two (Abstract).

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Regarding the gas channels extending to the first surface and being hollow and open along an entirety of said length, Fig 7-Fig 10 show gas channels, which extend to the first surface through the pores in the porous material since they allow the flow to reach the first surface. It is inherent that the pores work because they are connected to each other continuously up to the surface and they must be hollow to allow the flow to take place.

Regarding claims 49 and 50 it appears that the diameter pertains to channels. In this situation disclosed pores are the channels to allow the flow and their size is a matter of optimization since they determine the flow, which is a process requirement.

#### ***Response to Arguments***

Applicant's arguments filed 7/30/2007 have been fully considered but they are not persuasive.

Applicant's arguments regarding the added limitation are addressed in the rejection.

#### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ram N. Kackar whose telephone number is 571 272 1436. The examiner can normally be reached on M-F 8:00 A.M to 5:P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on 571 272 1435. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Ram Kackar

Primary Examiner AU 1763